

Horizon Oil & Gas #1-24 Navajo
Mobil
NW SW 24-39N-23E Apache County 412

P-W



LEASE NO. Nav 14-20-0603-8165

WELL NAME Horizon Oil & Gas #1-24 Navajo-Mobil

LOCATION NW SW SEC 24 TWP 39N RANGE 23E FOOTAGE 1980' FSL 660' FWL

CONTRACTOR JCM Drilling Co., Okla City, Okla

<u>CASING SIZE</u>	<u>DEPTH</u>	<u>CEMENT</u>	<u>LINER SIZE & DEPTH</u>	<u>DRILLED BY ROTARY</u> _____
<u>13 3/8</u>	<u>369'</u>	<u>150 SKs</u>	<u>NA</u>	<u>DRILLED BY CABLE TOOL</u> _____
<u>8 5/8</u>	<u>2571</u>	<u>440 SKs</u>		<u>PRODUCTIVE RESERVOIR</u> _____
				<u>INITIAL PRODUCTION</u> <u>Dry</u>

[illegible]

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG
Borehole Com. SonicGr			SAMPLE DESCRP. <u>x</u>
Neutron Porosity, Dual			SAMPLE NO. <u>Farm Cut</u>
Induc. Laterlog			CORE ANALYSIS <u></u>
			DSTs <u>x</u>
REMARKS <u>Designation of Operator - Mobil to Horizon</u>			APP. TO PLUG <u>x</u>
			PLUGGING REP. <u>x</u>
			COMP. REPORT <u>x</u>

WATER WELL ACCEPTED BY _____

BOND CO. Travelers Indemnity Co. BOND NO. 1315313

BOND AMT. \$ 5,000 CANCELLED 5-15-68 ORGANIZATION REPORT 5-12-67

FILING RECEIVED 1954 LOC. PLAT x WELL BOOK x PLAT BOOK x

API NO. 02-001-20036 DATE ISSUED 5-26-67 DEDICATION W/2 SW/4

(over)

DRILL STEM TEST

NO.	FROM	TO	RESULTS
1	6125	6153	Open 65" Rec 5' M ISIP 2065/30" FSIP 1998#/30"

CORE RECORD

NO.	FROM	TO	RECOVERY	REMARKS

REMEDIAL HISTORY

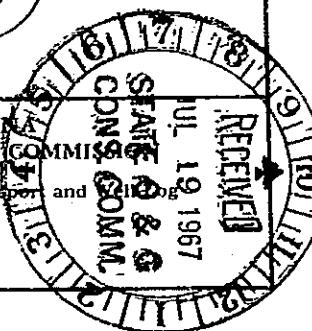
DATE STARTED - COMPLETED		WORK PERFORMED	NEW PERFORATIONS

ADDITIONAL INFORMATION

ADDITIONAL INFORMATION



WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG								
DESIGNATE TYPE OF COMPLETION:								
New Well <input type="checkbox"/>	Work-Over <input type="checkbox"/>	Deepen <input type="checkbox"/>	Plug Back <input type="checkbox"/>	Same Reservoir <input type="checkbox"/>	Different Reservoir <input type="checkbox"/>	Oil <input type="checkbox"/>	Gas <input type="checkbox"/>	Dry <input checked="" type="checkbox"/>
DESCRIPTION OF WELL AND LEASE								
Operator Horizon Oil & Gas Co. of Texas				Address P.O. Box #7, Spearman, Texas 79081				
Federal, State or Indian Lease Number or name of lessor if fee lease Navajo-Mobil				Well Number 1-24		Field & Reservoir Wildcat		
Location 1980' from S & 660' from W				County Apache				
Sec. TWP-Range or Block & Survey Section 24, Township 39N, Range 23E								
Date spudded 6/8/67	Date total depth reached 7/6/67	Date completed, ready to produce -	Elevation (DE, RKB, RT or Gr.) K.B. 5237 feet	Elevation of casing hd. flange G.L. 5225 feet				
Total depth 6452	P.B.T.D. -	Single, dual or triple completion? Dry Hole		If this is a dual or triple completion, furnish separate report for each completion. Dry Hole				
Producing interval (s) for this completion Dry Hole				Rotary tools used (interval) Rotary Tools to T.D.		Cable tools used (interval) none		
Was this well directionally drilled? Yes		Was directional survey made? Yes (Rig Survey)		Was copy of directional survey filed? no		Date filed -		
Type of electrical or other logs run (check logs filed with the commission) Dual Induction-Laterolog, Bore Hole Compensated Sonic w/Caliper, Sidewall Neutron with Gamma Ray Caliper				Date filed 7/6/67				
CASING RECORD								
Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)								
Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled		
	15"	13-3/8"	48#	369 K.B.	150	none		
	10-5/8"	8-5/8"	24#	2571 K.B.	440	none		
TUBING RECORD				LINER RECORD				
Size NONE in.	Depth set - ft.	Packer set at - ft.	Size - in.	Top NONE ft.	Bottom - ft.	Sacks cement -	Screen (ft.) -	
PERFORATION RECORD				ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD				
Number per ft.	Size & type	Depth Interval		Am't. & kind of material used		Depth Interval		
NONE				NONE				
INITIAL PRODUCTION								
Date of first production -		Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:) -						
Date of test -	Hrs. tested -	Choke size -	Oil prod. during test - bbls.	Gas prod. during test - MCF	Water prod. during test - bbls.	Oil gravity API (Corr)		
Tubing pressure -	Casing pressure -	Cal'd rate of Production per 24 hrs. -	Oil - bbls.	Gas - MCF	Water - bbls.	Gas-oil ratio -		
Disposition of gas (state whether vented, used for fuel or sold): - Dry								
<p>CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the.....Production Manager.....of the</p> <p>.....Horizon Oil & Gas Co. of Texas.....(company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.</p> <p>July 18, 1967 Date</p> <p style="text-align: right;"><i>David H. Gray</i> Signature</p>								
Permit No. 412				<p style="text-align: center;">STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION</p> <p style="text-align: center;">Well Completion or Recompletion Report and Log</p> <p style="text-align: center;">Form No. 4</p> <p style="text-align: center;">File One Copy</p>				



24-39N-23E

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*	★
Base Kayenta	630	885	Sand & Shale	
Chinle	885	1705	Sand & Shale	
Shinarump	1705	1763	Sand & Shale	
Woen-Kopi	1763	1860	Sand & Shale	
DeChelley 670'	1860	2530	Sand & Shale <i>may be basal Trias. ss</i>	
Oregon Rock 1431'	2530	3967	Sand & Shale	
Hermosa (Penn)	3967	4492	Sand & Shale	(+1270)
"A" Zone	4492	4596	Sand & Shale	+ 745
"B" Zone	4596	4709	Sand & Shale	+ 641
"C" Zone	4709	4833	Sand & Shale	+ 528
"D" Zone	4833	4969	Sand & Shale	+ 404
"E" Zone	4969	5096	Sand & Shale	+ 268
"F" Zone	5096	5170	Sand & Shale	+ 141
"G" Zone	5170	5266	Sand & Shale	+ 67
Molas	5266	5344	Sand & Shale	- 29
Mississippi	5344	5685	Sand & Shale	-107
OuRay (Devonian)	5685	5786	Sand & Shale	- 448
Gilbert	5786	6017	Sand & Shale	-549
McCracken	6017	6121	Sand & Shale	- 780
Aneth	6121	6265	Sand & Shale	- 874
Bright Angel (Pre Cambrian)	6265	6340	Sand & Shale	- 1029
Tapeats	6340	6443	Sand & Shale	- 1103
PreCambrian	6443	6452	Sand & Shale	- 1206
T.D.	6452			

* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

This Well Completion or Recompletion report and well log shall be filed with the State of Arizona Oil & Gas Conservation Commission not later than thirty days after project completion.

Form No. 4

APPLICATION TO ABANDON AND PLUG

FIELD Wildcat
 OPERATOR Horizon Oil & Gas Co. of Texas ADDRESS P.O. Box 7, Spearman, Texas 79081
 Federal, State, or Indian Lease Number _____
 or Lessor's Name if Fee Lease Navajo-Mobil WELL NO. 1-24
 SURVEY Twp. 39N, Rge 23E SECTION 24 COUNTY Apache
 LOCATION 1980' from South line and 660' from west line

TYPE OF WELL Dry (Oil, Gas or Dry Hole) TOTAL DEPTH 6452
 ALLOWABLE (If Assigned) Noen - Dry Hole
 LAST PRODUCTION TEST OIL - (Bbls.) WATER - (Bbls.)
 GAS - (MCF) DATE OF TEST -
 PRODUCING HORIZON None - Dry Hole PRODUCING FROM - TO -

1. COMPLETE CASING RECORD

13-3/8" set @ 369' K.B.
8-5/8" set @ 2571' K.B.

2. FULL DETAILS OF PROPOSED PLAN OF WORK

Cement Plugs: 5975' to 6150'
5300' to 5400'
3900' to 4000'
2550' to 2650'

Surface Plug and Marker

If well is to be abandoned, does proposed work conform with requirements of Rule 202? Yes If not, outline proposed procedure above.

DATE COMMENCING OPERATIONS 7/6/67

NAME OF PERSON DOING WORK Halliburton ADDRESS Farmington, N.M.

CORRESPONDENCE SHOULD BE SENT TO Horizon Oil & Gas Co. of Texas

Edgett R. Gray
 Title

Prod. Mgr.

P.O. Box #7, Spearman, Texas 79081
 Address

July 18, 1967
 Date

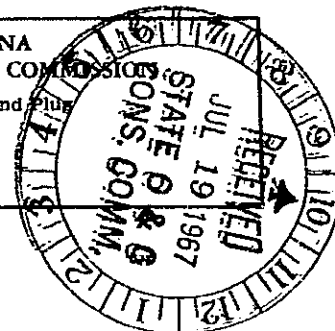
Date Approved 7-20-67
 STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION

By: John M. Bannister

Permit No. 412

STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 Application to Abandon and Plug
 File Two Copies

Form No. 9



NOTICES AND REPORTS ON WELLS

1. Name of Operator Horizon Oil & Gas Co. of Texas

2. OIL WELL ☐ GAS WELL ☐ OTHER ☒ (Specify) Dry Hole

3. Well Name Navajo-Mobil #1-24

Location 1980' from S line and 660' from W line

Sec 24 Twp 39N Rge 23E County Apache Arizona.

4. Federal, State or Indian Lease Number, or lessor's name if fee lease Indian Lease (14-20-0603-8165)

5. Field or Pool Name Wildcat

6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	MONTHLY PROGRESS <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(OTHER) <input type="checkbox"/>	ABANDONMENT <input checked="" type="checkbox"/>

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

7. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

This location has been cleaned up, restored and ready for inspection.

8. I hereby certify that the foregoing is true and correct.

Signed

David R. Chay

Title Production Manager

Date 9/14/67

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Sundry Notices and Reports On Wells
File Two Copies

Form No. 25

Permit No. 412

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.6.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input checked="" type="checkbox"/> Other _____		5. LEASE DESIGNATION AND SERIAL NO. No. 14-20-0603-8165	
b. TYPE OF COMPLETION: NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> Other _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo Tribal	
2. NAME OF OPERATOR Horizon Oil & Gas Co. of Texas		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR P.O. Box #7, Spearman, Texas 79081		8. FARM OR LEASE NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1980' from S. line & 660' from W. line At top prod. interval reported below Same At total depth Same		9. WELL NO. 1-24	
14. PERMIT NO. 412		10. FIELD AND POOL, OR WILDCAT Wildcat	
DATE ISSUED 5/26/67		11. SEC. T. R. S. OR BLOCK AND SURVEY OR AREA Sec. 24, T. 39N, R. 23E	
15. DATE SPOOLED 6/8/67		12. COUNTY OR PARISH Apache	
16. DATE T.D. REACHED 7/6/67		13. STATE Arizona	
17. DATE COMPL. (Ready to prod.) 7/7/67 (Dry)		18. ELEVATIONS (DP, RKB, RT, GR, ETC.)* K.B. 5237	
19. ELEV. CASINGHEAD G.L. 5225		20. TOTAL DEPTH, MD & TVD 6452	
21. PLUG, BACK T.D., MD & TVD -		22. IF MULTIPLE COMPL., HOW MANY* None	
23. INTERVALS DRILLED BY Rotary		24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* NONE	
25. WAS DIRECTIONAL SURVEY MADE Yes (Rig Surveys)		26. TYPE ELECTRIC AND OTHER LOGS RUN Dual Induction-Laterolog, Bore Hole Compensated Sonic with Calliper, Sidewall Neutron with Gamma Ray Calliper	
27. WAS WELL CORED No		28. CASING RECORD (Report all strings set in well)	
CASING SIZE		WEIGHT, LB./FT.	
13-3/8"		48#	
8-5/8"		24#	
DEPTH SET (MD)		HOLE SIZE	
369 (KB)		15"	
2571 (KB)		10-5/8"	
CEMENTING RECORD		AMOUNT PULLED	
150 sx. Class A		None	
140 sx. Class C		None	
29. LINER RECORD		30. TUBING RECORD	
SIZE		SIZE	
TOP (MD)		DEPTH SET (MD)	
BOTTOM (MD)		PACKER SET (MD)	
SACKS CEMENT*		SCREEN (MD)	
NONE		NONE	
31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED	
NONE			
33. PRODUCTION		34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)	
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	
WELL STATUS (Producing or shut in)			
DATE OF TEST		HOURS TESTED	
CHOKE SIZE		PROD'N. FOR TEST PERIOD	
OIL—BBL.		GAS—MCF.	
WATER—BBL.		GAS—MCF.	
WATER—BBL.		GAS—MCF.	
FLOW. TUBING PRESS.		CASING PRESSURE	
CALCULATED 24-HOUR RATE		OIL—BBL.	
GAS—MCF.		WATER—BBL.	
TEST WITNESS			
35. LIST OF ATTACHMENTS			
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records			
SIGNED <i>Paul R. Ray</i>		TITLE Production Manager	
DATE July 7, 1967			

* (See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. (drillers, geologists, sample and core analysis, all types electric, etc.), formations and pressure tests, any directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 30.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which formation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Seals, Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES			38. GEOLOGIC MARKERS			
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	NEAR. DEPTH	TRUE VERT. DEPTH
Base Kayenta	630	885	Sand & Shale			
Chinle	885	1705	Sand & Shale			
Shinarump	1705	1763	Sand & Shale			
Noen Kopl	1763	1860	Sand & Shale			
DeChelly	1860	2530	Sand & Shale			
Oregon Rock	2530	3967	Sand & Shale			
Hermosa (Penn)	3967	4492	Sand & Shale			
"A" Zone	4492	4596	Sand & Shale			
"B" Zone	4596	4709	Sand & Shale			
"C" Zone	4709	4833	Sand & Shale			
"D" Zone	4833	4969	Sand & Shale			
"E" Zone	4969	5096	Sand & Shale			
"F" Zone	5096	5170	Sand & Shale			
"G" Zone	5170	5266	Sand & Shale			
Holas	5266	5344	Sand & Shale			
Mississippi	5344	5685	Sand & Shale			
Ouray (Devonian)	5685	5786	Sand & Shale			
Gilbert	5786	6017	Sand & Shale			
McCracken	6017	6121	Sand & Shale			
Aneth	6121	6265	Sand & Shale			
Bright Angel	6265	6340	Sand & Shale			
Tapewits	6340	6443	Sand & Shale			
PreCambrian	6443	6452	Sand & Shale			
T.D.	6452					

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved
Budget Bureau No. 42-R1424

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER ☒ Dry Hole

2. NAME OF OPERATOR

Horizon Oil & Gas Co. of Texas

3. ADDRESS OF OPERATOR

P.O. Box #7, Spearman, Texas 79081

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below.)
At surface

1980' from S. line and 660' from W. line

14. PERMIT NO.

412

15. ELEVATIONS (Show whether DP, RT, GR, etc.)

K.B. 5237

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

SUBSEQUENT REPORT OF:

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(Note: Report results of multiple completion on Well Completion or Completion Report and Log Form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

T.D. 6452'

Set cement plugs: 5975' to 6150'
5300' to 5400'
3900' to 4000'
2550' to 2650'
Surface plug and marker

Sundry Notices to follow when location is cleaned up, restored and ready for inspection.

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

Production Manager

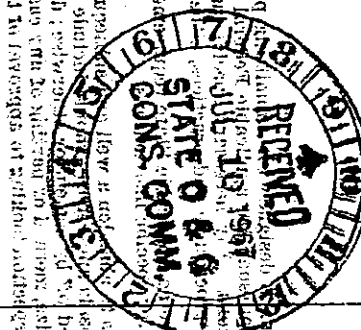
(This space for Federal or State office use)

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side



BUS. PHONE (405) JA 8-2309

RES. PHONE (405) VI 2-2201

J.C.M. Drilling Company

600 CITIZENS BANK TOWER BUILDING
2200 CLASSEN BLVD.
OKLAHOMA CITY, OKLAHOMA 73106

February 8, 1968

Horizon Oil & Gas Co.
P. O. Box 7
Spearman, Texas

ATTN: Everett R. Tracy
Production Manager

RE: #1-24 Navajo-Mobil
Sec. 24, twp. 39N, Rge 23E
Apache County, Arizona

Dear Mr. Tracy:

Below is the directional survey (rig deviation) of the above captioned well as requested in your letter dated February 5, 1968:

3/12/67	120'	1°
	347'	1°
3/15/67	684'	1 1/2°
3/16/67	1013'	1/2°
3/17/67	1737'	3/4°
	2256'	1 1/2°
3/19/67	2448'	1 1/2°
	2542'	1°
3/20/67	2654'	1 3/4°
	2747'	1°
	2841'	3/4°
	2943'	3/4°
	3252'	1 1/4°
3/21/67	3677'	1°
3/27/67	5041'	3/4°
3/28/67	5209'	1 1/4°
3/29/67	5334'	1 1/4°
3/31/67	5556'	1 1/4°
4/5/67	6005'	1 1/2°

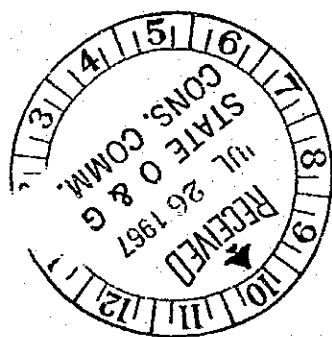
Thank you.

J.C.M. DRILLING COMPANY

Mike
Michael C. Clark

MCC/ckw

412



412

BUS. PHONE (405) JA 8-2309

RES. PHONE (405) VI 2-2201

J.C.M. Drilling Company

600 CITIZENS BANK TOWER BUILDING
2200 CLASSEN BLVD.
OKLAHOMA CITY, OKLAHOMA 73106

FORMATION RECORD

OPERATOR: HORIZON OIL COMPANY
LEASE NAME: Navajo #1
LOCATION: NW 1/4 Sec. 38-38N-24E
Apache County, Arizona

0' - 107'	Red Bed	5282' - 5326'	Lime
107' - 275'	Red Bed	5326' - 5359'	Shale & Lime
275' - 375'	Red Bed	5359' - 5398'	Shale, Lime
375' - 410'	Sand	5398' - 5454'	Shale & Lime
410' - 566'	Red Bed	5454' - 5498'	Shale & Lime
566' - 831'	Sand	5498' - 5508'	Shale & Lime
831' - 1165'	Sand	5508' - 5554'	Shale, Snd., Lm.
1165' - 1403'	Sand	5554' - 5592'	Lime & Shale
1403' - 1493'	Sand	5592' - 5632'	Lime & Shale
1493' - 1588'	Sand	5632' - 5700'	Shale & Lime
1588' - 1809'	Sand & Shale	5700' - 5730'	Shale & Lime
1809' - 2065'	Sand & Shale	5730' - 5790'	Shale & Lime
2065' - 2098'	Sand & Shale	5790' - 5817'	Shale & Lime
2098' - 2413'	Sand & Shale	5817' - 5862'	Shale & Lime
2413' - 2544'	Sand & Shale	5862' - 5896'	Shale & Lime
2544' - 2603'	Sand & Shale	5896' - 5920'	Shale & Lime
2603' - 2620'	Sand & Shale	5920' - 5958'	Shale & Lime
2620' - 2710'	Shale	5958' - 5977'	Shale & Lime
2710' - 2948'	Shale		Dolomite
2948' - 3224'	Sand & Shale	5977' - 6008'	Shale & Lime
3224' - 3373'	Sand & Shale		Dolomite
3373' - 3522'	Sand & Shale	6008' - 6039'	Dolomite
3522' - 3688'	Sand & Shale	6039' - 6069'	Shale & Dolomite
4270' - 4410'	Shale & Lime	6069' - 6105'	Shale & Lime
4410' - 4577'	Sand, Shale, Lime, Chert		Dolomite
4577' - 4672'	Sand & Shale, Lime	6105' - 6137'	Dolomite & Lime
4672' - 4788'	Lime & Shale	6137' - 6153'	Dolomite & Lime
4788' - 5008'	Sand, Lime, Shale	6153' - 6155'	Sand & Dolomite
5008' - 5083'	Sand, Shale, Lime	6155' - 6185'	Dolomite
5083' - 5125'	Sand, Shale, Lime	6185' - 6220'	Sand, Shale, Lime
5125' - 5189'	Lime & Shale		Lime
5189' - 5214'	Lime & Shale	6220' - 6247'	Sand, Shale
5214' - 5221'	Lime & Shale		Anhydrite
5221' - 5266'	Lime & Shale	6247' - 6276'	Sand, Shale & Lime, Anhydrite
5266' - 5288'	Shale & Lime	6276' - 6318'	Shale & Lime
		6318' - 6364'	Sand, Shale
			Dolomite
		6364' - 6418'	Sand & Shale
		6418' - 6449'	Total Depth

STORY NOTICES AND REPORTS ON WELLS

1. Name of Operator Horizon Oil & Gas Co. of Texas

2. OIL WELL ☒ GAS WELL ☒ OTHER ☐ (Specify) _____

3. Well Name NAVAJO-MOBIL #1-24

Location 1980' from S line and 660' from W line

Sec. 24 Twp. 39N Rge. 23E County Apache Arizona.

4. Federal, State or Indian Lease Number, or lessor's name if fee lease Indian Lease (14-20-0603-8165)

5. Field or Pool Name Wildcat

6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	MONTHLY PROGRESS <input checked="" type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTERING CASING <input checked="" type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>		ABANDONMENT <input type="checkbox"/>
(OTHER) _____		(OTHER) _____	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

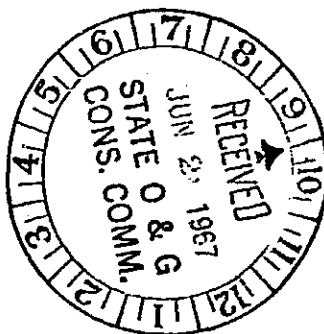
7. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Spud 6/8/67

6/9/67: Ran 11-3/4" casing & set @ 369' K.B. Cemented with 150 sacks Class A cement

6/15/67: Ran 80 jts. 8-5/8" casing & set @ 2571'. Cemented with 440 sacks cement.

6/26/67: Drilling @ 5590'.



8. I hereby certify that the foregoing is true and correct.

Signed Robert R. Dray Title Prod. Mgr. Date 6/26/67

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Sundry Notices and Reports On Wells
File Two Copies

Permit No. 412

Form No. 25

WELL SITE CHECK

By JRS
Date 7-6-67

Contractor Man. Dalg Rig #2 Person(s) Contacted Dave Thomas
Chuck Wheeler (Mobil in Casper)
 Spud Date _____
 Type Rig _____ Rotary ☒ Cable Tool _____ Present Operations _____
 Samples Delivered to Farmington cut
 Pipe _____ Drilling with Air ☒ Mud ☒ see below
 Water Zones _____ Size Hole _____
 Lost Circ. Zones _____ Size Drill Pipe _____
 Formation Tops _____ Type Bit _____
 Cores, Logs, DST _____ No. Bit _____ Drilling Date _____
 Formation pre E
 Crews _____ Lithology _____

REMARKS, PHOTO, MAP

Ran DST Top Aneth formation: 6125-53' Open 65" Rec
 5' m. ; 151P 2065 #/30"
 FSIP 1998 #/30"

[GAVE verbal permission
to plug.]

TD 6452 DNL } in Pre Cambrian
 TD 6449 Sch }

Top pre E (samples) 6241'

(Dave
South from
Dinnerholm)

Drilled w/ air to 5083'
 " w/ mud from 5083 → 6452 TD

WELL NAME Horizon 1-24 Navajo. Mobil

Permit No. 412
 Confidential: yes No

SUNDY NOTICES AND REPORTS ON WELLS

1. Name of Operator Horizon Oil & Gas Co. of Texas
 2. OIL WELL ☒ GAS WELL ☒ OTHER ☐ (Specify) _____
 3. Well Name NAVAJO-MOBIL #1-24
 Location 1980' from S line and 660' from W line
 Sec. 24 Twp. 39N Rge. 23E County Apache Arizona.
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease Indian Lease (14-20-0603-8165)

5. Field or Pool Name Wildcat

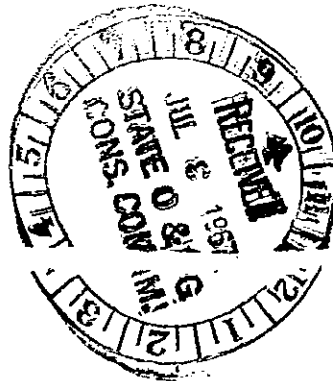
6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	Weekly <input checked="" type="checkbox"/> MONTHLY PROGRESS <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(OTHER) <input type="checkbox"/>	ABANDONMENT <input type="checkbox"/>
(OTHER) <input type="checkbox"/>			

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

7. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Drilling 6037'



8. I hereby certify that the foregoing is true and correct.

Signed David R. Gray

Title Prod. Mgr.

Date 6/30/67

Permit No. 412

Form No. 25

STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 Sundry Notices and Reports On Wells
 File Two Copies

Form 9-331 C
(May 1963)

SUBMIT IN THE "GATE"
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. No. 14-20-0601-8165	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo Tribal	
2. NAME OF OPERATOR Horizon Oil & Gas Co.		7. UNIT AGREEMENT NAME Navajo Mobil	
3. ADDRESS OF OPERATOR P.O. Box 47, Spearman, Texas 79081		8. FARM OR LEASE NAME 1-34	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1980' fr. S. line & 660' fr. W line, Sec. 24, T 39N, R 23E, At proposed prod. zone Apache County, Arizona		9. WELL NO. 1-34	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 3 miles South Dinahoe		10. FIELD AND POOL, OR WILDCAT Wildcat	
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any)		11. SEC. T. R. OR BLK. AND SURVEY OR AREA Sec. 24, T 39N, R 23E	
16. NO. OF ACRES IN LEASE 2560		12. COUNTY OR PARISH Apache	
17. PROPOSED DEPTH 6500 (Cambrian)		13. STATE Arizona	
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.		17. NO. OF ACRES ASSIGNED TO THIS WELL 80	
19. ELEVATIONS (Show whether DF, RT, GR, etc.) G.L. Elevation: 5225'		20. ROTARY OR CABLE TOOLS Rotary	
21. APPROX. DATE WORK WILL START 6/1/67			
23. PROPOSED CASING AND CEMENTING PROGRAM			
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH
15"	11-3/4"	42#	350
7-7/8"	5-1/2"	15.5#	6500
		QUANTITY OF CEMENT	
		155 sacks	
		300 sacks	

We propose to drill with rotary tools to approximately 6500', set casing, perforate, and acidize.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED <u>[Signature]</u> TITLE <u>Production Manager</u> DATE <u>5/24/67</u>	
(This space for Federal or State office use)	
PERMIT NO. _____	APPROVAL DATE _____
APPROVED BY _____	TITLE _____
CONDITIONS OF APPROVAL, IF ANY:	

*See Instructions On Reverse Side

APPLICATION FOR PERMIT TO DRILL, DEEPEN, PLUG BACK, OR RE-ENTER

APPLICATION TO DRILL ☒ DEEPEN ☐ PLUG BACK ☐ RE-ENTER OLD WELL ☐

NAME OF COMPANY OR OPERATOR Horizon Oil & Gas Co.

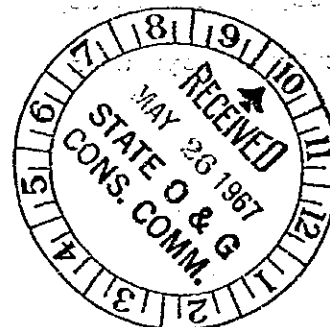
DATE May 24, 1967

Address P.O. Box #7 City Spearman State Texas

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number or name of lessor, if fee lease No. 14-20-0603-8165	Well number 1-24	Elevation (ground) G.L. 5225'
Well location and acreage dedicated to the well (give footage from section lines) 1980' fr. S line & 660' fr. W line (80 acres)		Section—township—range or block & survey 24 39N 23E
Field & reservoir (If wildcat, so state) Wildcat	County Apache, Arizona	
Distance, in miles, and direction from nearest town or post office 5 Miles South Dinnehotso		
Nearest distance from proposed location to property or lease line: 660 feet	Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: None feet	
Proposed depth: 6500' (Cambrian)	Rotary or cable tools Rotary	Approx. date work will start 6/1/67
Number of acres in lease: 2560	Number of wells on lease, including this well, completed in or drilling to this reservoir: one	
If lease, purchased with one or more wells drilled, from whom purchased:	Name	Address
Status and amount of bond Filed - \$5,000.00	Organization Report On file Or attached On file	Filing Fee of \$25.00 Attached Yes

Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone)



*Fill in Proposed Casing Program on reverse side

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the..... Production Manager..... of the..... Horizon Oil & Gas Company..... (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Jack R. Phay
Signature

May 24, 1967
Date

Permit Number: 412
Approval Date: 5-29-67
Approved By: John Bannister
Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.
See Instruction on Reverse Side of Form

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Drill, Deepen or Plug Back and Plat
File Two Copies

Form No. 3

1. Operator shall outline the dedicated acreage for both oil and gas wells on the plat.
2. A registered professional engineer or land surveyor registered in the State of Arizona or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.
3. All distances shown on the plat must be from the outer boundaries of the Section.
4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES ☒ NO ☐
5. If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES ☐ NO ☐ If answer is "yes," Type of Consolidation _____
6. If the answer to question four is "no," list all the owners and their respective interests below:

Owner	Land Description

CERTIFICATION

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

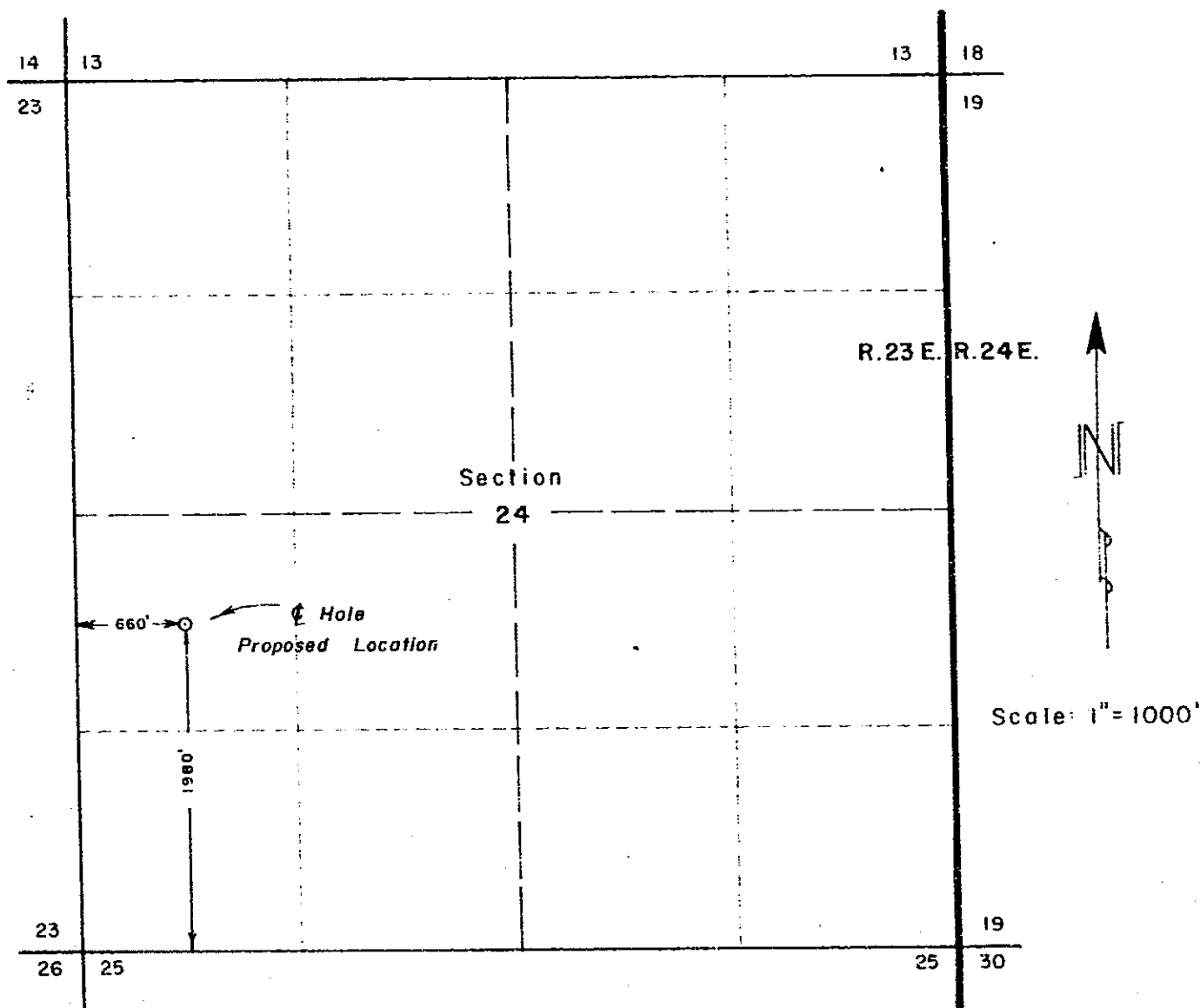
Name _____
Production Manager
Position _____
Horizon Oil & Gas Co.
Company _____
May 24, 1967
Date _____

I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed _____
May 13, 1967
Registered Professional Engineer and/or Land Surveyor
Frederick H. Reed
Certificate No. **5313**

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
11-3/4	42#	H-40	surface	350	250	155
5-1/2	15.5#	J-55	"	6500	5500 to 6500	300



WELL LOCATION: Horizon Oil & Gas Co. - No. 1 Navajo

Located 1980 feet North of the South line and 660 feet East of the West line of Section 24
 Township 39 North, Range 23 East, Gila & Salt River Meridian
 Apache Co., Arizona
 Existing ground elevation determined at 5225 feet based on adjoining locations.

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief.

Frederick H. Reed

FREDERICK H. REED
 Registered Land Surveyor
 State of Arizona # 5313

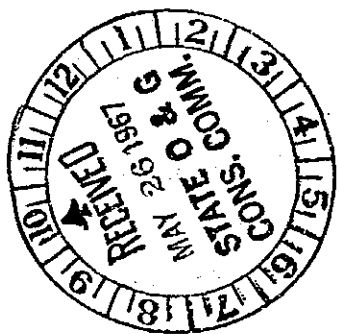


Horizon Oil & Gas Co.

WELL LOCATION PLAT
 Sec. 24, T. 39 N., R. 23 E.
 Apache Co., Arizona

CLARK-REED & ASSOC.
 Durango, Colorado

DATE May 13, 1967
 FILE NO. 67041





PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: HORIZON OIL & GAS CO. OF TEXAS
(OPERATOR)

to drill a well to be known as

HORIZONA #1-24 NAVAJO-MOBIL
(WELL NAME)

located 1980' FSL and 660' FWL

Section 24 Township 39N Range 23E, Apache County, Arizona.

The W/2 SW/4 of said
Section, Township and Range is dedicated to this well.

Said well is to be drilled substantially as outlined in the attached Application and must be drilled
in full compliance with all applicable laws, statutes, rules and regulations of the State of Arizona.

Issued this 26th day of May, 19 67.

OIL AND GAS CONSERVATION COMMISSION

By

John Bannister
EXECUTIVE SECRETARY

PRIOR TO BEING ALLOWED TO PRODUCE THIS WELL
YOU MUST BE IN FULL COMPLIANCE WITH RULE
105, SECTION A THRU G (SPACING), WITH RESPECT
TO THE PRODUCT TO BE PRODUCED.

PERMIT **Nº 412**

RECEIPT NO. **9504**

State of Arizona
Oil & Gas Conservation Commission

Permit to Drill

FORM NO. 27

API # 02-001-20036

KNOW ALL MEN BY THESE PRESENTS

BOND SERIAL NO. 1315313

That we: Horizon Oil & Gas Co. of Texas, a Texas corporation

of the County of: Dallas in the State of: Texas

as principal, and The Travelers Indemnity Company

of Hartford, Connecticut

AUTHORIZED TO DO BUSINESS WITHIN the State of Arizona.

as surety, are held and firmly bound unto the Oil and Gas Conservation Commission, State of Arizona, in the penal sum as indicated, lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, and each of us, and each of our heirs, executors, administrators or successors, and assigns jointly and severally, firmly by these presents. The conditions of this obligation is that whereas the above bounden principal proposes to drill a well or wells for oil, gas, helium, other minerals, or for stratigraphic purposes in and upon the following described land situated within the State, to wit:

NW 1/4, S24, Section 24, Township 39 North Range 23E G&SRM
(May be used as blanket bond or for single well)

Apache County, Arizona

NOW, THEREFORE, if the above bounden principal shall comply with all of the provisions of the laws of this State and the rules, regulations and orders of the Oil and Gas Conservation Commission, especially with reference to the requirements of A.R.S. 27-516, providing for the proper drilling, casing and plugging of said well or wells, and filing with the Oil & Gas Conservation Commission all notices and records required by said Commission, in the event said well or wells do not produce oil or gas in commercial quantities, or cease to produce oil or gas in commercial quantities, then this obligation is void; otherwise, the same shall be and remain in full force and effect. Liability under this bond may not be terminated without written permission of this commission.

Penal sum of Five Thousand And No/100 - - - - - (\$5,000.00) Dollars

Witness our hands and seals, this 12th day of May, 1967

Attest: Horizon Oil & Gas Co. of Texas
By Newton H. Ballou, Secretary By Curtis E. Calder, President

Witness our hands and seals, this 12th day of May, 1967

The Travelers Indemnity Company

Julian I. Hazlewood, Attorney-in-Fact

Surety, Resident Arizona Agent
(If issued in a state other than Arizona)

(If the principal is a corporation, the bond should be executed by its duly authorized officers, with the seal of the corporation affixed. When principal or surety executes this bond by agent, power of attorney or other evidence of authority must accompany the bond.)

Approved Date 5-26-67

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
By: John Bannister

Permit No. 412

OIL & GAS CONSERVATION COMMISSION

Form No. 2

The Travelers Indemnity Company

Hartford, Connecticut

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That THE TRAVELERS INDEMNITY COMPANY, a corporation of the State of Connecticut, does hereby make, constitute and appoint

Julian I. Hazlewood, Asa Jackson, Sam R. Kimmell, Ronald G. McDearman, C. W. Morgan, J. Burns Smith, R. S. Williams, Jr., all of Dallas, Texas, EACH

its true and lawful Attorney(s)-in-Fact, with full power and authority, for and on behalf of the Company as surety, to execute and deliver and affix the seal of the Company thereto, if a seal is required, bonds, undertakings, recognizances, consents of surety or other written obligations in the nature thereof, as follows:

Any and all bonds, undertakings, recognizances, consents of surety or other written obligations in the nature thereof

and to bind THE TRAVELERS INDEMNITY COMPANY thereby, and all of the acts of said Attorney(s)-in-Fact, pursuant to these presents, are hereby ratified and confirmed.

This appointment is made under and by authority of the following by-laws of the Company which by-laws are now in full force and effect:

ARTICLE IV, SECTION 11. The Chairman of the Board, the President, the Chairman of the Finance Committee, the Chairman of the Insurance Executive Committee, any Vice President, any Second Vice President, any Secretary or any Department Secretary may appoint attorneys-in-fact or agents with power and authority, as defined or limited in their respective powers of attorney, for and on behalf of the Company to execute and deliver, and affix the seal of the Company thereto, bonds, undertakings, recognizances, consents of surety or other written obligations in the nature thereof and any of said officers may remove any such attorney-in-fact or agent and revoke the power and authority given to him.

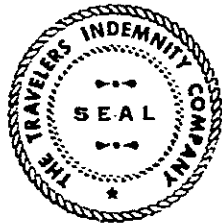
ARTICLE IV, SECTION 13. Any bond, undertaking, recognizance, consent of surety or written obligation in the nature thereof shall be valid and binding upon the Company when signed by the Chairman of the Board, the President, the Chairman of the Finance Committee, the Chairman of the Insurance Executive Committee, any Vice President or any Second Vice President and duly attested and sealed, if a seal is required, by any Secretary or any Department Secretary or any Assistant Secretary or when signed by the Chairman of the Board, the President, the Chairman of the Finance Committee, the Chairman of the Insurance Executive Committee, any Vice President or any Second Vice President and countersigned and sealed, if a seal is required, by a duly authorized attorney-in-fact or agent; and any such bond, undertaking, recognizance, consent of surety or written obligation in the nature thereof shall be valid and binding upon the Company when duly executed and sealed, if a seal is required, by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority granted by his or their power or powers of attorney.

This power of attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Directors of THE TRAVELERS INDEMNITY COMPANY at a meeting duly called and held on the 30th day of November, 1959:

VOTED: That the signature of any officer authorized by the By-Laws and the Company seal may be affixed by facsimile to any power of attorney or special power of attorney or certification of either given for the execution of any bond, undertaking, recognizance or other written obligation in the nature thereof; such signature and seal, when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

This power of attorney revokes that dated September 20, 1965 on behalf of Julian I. Hazlewood, Asa Jackson, Sam R. Kimmell, Ronald G. McDearman, C. W. Morgan, Lee W. Sarty, Jr., J. Burns Smith

IN WITNESS WHEREOF, THE TRAVELERS INDEMNITY COMPANY has caused these presents to be signed by its proper officer and its corporate seal to be hereunto affixed this 8th day of June 19 66.



THE TRAVELERS INDEMNITY COMPANY

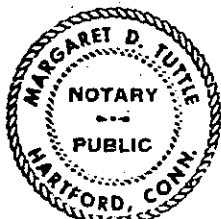
By

G. Roger Wheeler

Secretary, Fidelity and Surety

State of Connecticut, County of Hartford—ss:

On this 8th day of June in the year 1966 before me personally came G. Roger Wheeler to me known, who, being by me duly sworn, did depose and say: that he resides in the State of Connecticut; that he is Secretary (Fidelity and Surety) of THE TRAVELERS INDEMNITY COMPANY, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by authority of his office under the by-laws of said corporation, and that he signed his name thereto by like authority.



Margaret D. Tuttle

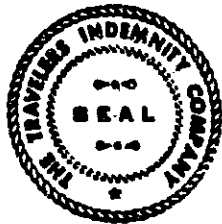
Notary Public

My commission expires April 1, 1969

CERTIFICATION

I, Wm A. Shrake, Assistant Secretary (Fidelity and Surety) of THE TRAVELERS INDEMNITY COMPANY certify that the foregoing power of attorney, the above quoted Sections 11. and 13. of Article IV of the By-Laws and the Resolution of the Board of Directors of November 30, 1959 have not been abridged or revoked and are now in full force and effect.

Signed and Sealed at Hartford, Connecticut, this 12th day of May 1967.



Wm A. Shrake
Assistant Secretary, Fidelity and Surety

B-1869 (BACK)

The Travelers Indemnity Company
Hartford, Connecticut

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That THE TRAVELERS INDEMNITY COMPANY, a corporation of the State of Connecticut, does hereby make, constitute and appoint

James R. Allen, Jr., Walter J. Shudde, Jr., H. Dean Thorndike, all of Phoenix, Arizona, EACH

its true and lawful Attorney(s)-in-Fact, with full power and authority, for and on behalf of the Company as surety, to execute and deliver and affix the seal of the Company thereto, if a seal is required, bonds, undertakings, recognizances, consents of surety or other written obligations in the nature thereof, as follows:

Any and all bonds, undertakings, recognizances, consents of surety or other written obligations in the nature thereof

and to bind THE TRAVELERS INDEMNITY COMPANY thereby, and all of the acts of said Attorney(s)-in-Fact, pursuant to these presents, are hereby ratified and confirmed.

This appointment is made under and by authority of the following by-laws of the Company which by-laws are now in full force and effect:

ARTICLE IV, SECTION 11. The Chairman of the Board, the President, the Chairman of the Finance Committee, the Chairman of the Insurance Executive Committee, any Vice President, any Second Vice President, any Secretary or any Department Secretary may appoint attorneys-in-fact or agents with power and authority, as defined or limited in their respective powers of attorney, for and on behalf of the Company to execute and deliver, and affix the seal of the Company thereto, bonds, undertakings, recognizances, consents of surety or other written obligations in the nature thereof and any of said officers may remove any such attorney-in-fact or agent and revoke the power and authority given to him.

ARTICLE IV, SECTION 13. Any bond, undertaking, recognizance, consent of surety or written obligation in the nature thereof shall be valid and binding upon the Company when signed by the Chairman of the Board, the President, the Chairman of the Finance Committee, the Chairman of the Insurance Executive Committee, any Vice President or any Second Vice President and duly attested and sealed, if a seal is required, by any Secretary or any Department Secretary or any Assistant Secretary or when signed by the Chairman of the Board, the President, the Chairman of the Finance Committee, the Chairman of the Insurance Executive Committee, any Vice President or any Second Vice President and countersigned and sealed, if a seal is required, by a duly authorized attorney-in-fact or agent; and any such bond, undertaking, recognizance, consent of surety or written obligation in the nature thereof shall be valid and binding upon the Company when duly executed and sealed, if a seal is required, by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority granted by his or their power or powers of attorney.

This power of attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Directors of THE TRAVELERS INDEMNITY COMPANY at a meeting duly called and held on the 30th day of November, 1959:

VOTED: That the signature of any officer authorized by the By-Laws and the Company seal may be affixed by facsimile to any power of attorney or special power of attorney or certification of either given for the execution of any bond, undertaking, recognizance or other written obligation in the nature thereof; such signature and seal, when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

This power of attorney revokes that dated January 5, 1966 on behalf of James R. Allen, Jr., Richard A. Beardsley, J. P. Harrison

IN WITNESS WHEREOF, THE TRAVELERS INDEMNITY COMPANY has caused these presents to be signed by its proper officer and its corporate seal to be hereunto affixed this 29th day of June 1966.



THE TRAVELERS INDEMNITY COMPANY

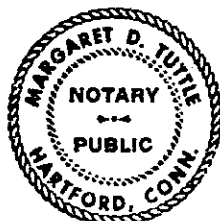
By

G. Roger Wheeler

Secretary, Fidelity and Surety

State of Connecticut, County of Hartford—ss:

On this 29th day of June in the year 1966 before me personally came G. Roger Wheeler to me known, who, being by me duly sworn, did depose and say: that he resides in the State of Connecticut; that he is Secretary (Fidelity and Surety) of THE TRAVELERS INDEMNITY COMPANY, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by authority of his office under the by-laws of said corporation, and that he signed his name thereto by like authority.



Margaret D. Tuttle

Notary Public

My commission expires April 1, 1969

CERTIFICATION

I, Wm A. Shrake, Assistant Secretary (Fidelity and Surety) of THE TRAVELERS INDEMNITY COMPANY certify that the foregoing power of attorney, the above quoted Sections 11. and 13. of Article IV of the By-Laws and the Resolution of the Board of Directors of November 30, 1959 have not been abridged or revoked and are now in full force and effect.

Signed and Sealed at Hartford, Connecticut, this

day of

19



Wm A. Shrake

Assistant Secretary, Fidelity and Surety

8-1869 (BACK)

THE TRAVELERS

THE TRAVELERS INDEMNITY COMPANY

Hartford, Connecticut

NOTICE OF CANCELLATION

May 10, 1968

Oil and Gas Conservation Commission
State of Arizona
Phoenix, Arizona

Bond No. 1315313

On the 12th day of May, 1968, THE TRAVELERS INDEMNITY COMPANY, as Surety,
executed a(n) Oil and Gas Lease bond in the penalty of Five Thousand And No/100 - -
- - - - - Dollars (\$5,000.00), on behalf of Horizon Oil and Gas Co. of Texas
of _____ as Principal, in favor of State of Arizona
_____, as Obligor. The bond, by its terms, provides that the Surety may terminate its liability by giving notice of its election
to do so to the Obligor. In accordance with the terms of the bond we hereby elect to terminate our liability and shall, as of
the 12th day of May, 1968 consider ourselves released from all liability by reason of
any default committed thereafter by the Principal.

Below is an Acknowledgement which we would appreciate your signing and returning.

THE TRAVELERS INDEMNITY COMPANY

By: Garnye Gill
Garnye Gill, Attorney-in-Fact

Please detach and return to
THE TRAVELERS INDEMNITY COMPANY
at the following address:

First National Bank Building

Dallas, Texas 75202

Bond No. 1315313
Horizon Oil and Gas Co. of Texas

ACKNOWLEDGEMENT

412 Your Notice of Cancellation has been received. We have arranged to cancel the bond effective the 15th
day of May, 1968
Date: 5-15, 1968

By: John V. Bannister

HORIZON OIL & GAS CO.



P. O. BOX 7
SPEARMAN, TEXAS

February 12, 1968

Mr. John Bannister
Oil & Gas Conservation Commission
State of Arizona
Room 202
1624 West Adams
Phoenix, Arizona 85007

Re: Horizon Oil & Gas #1-24
Navajo-Mobil, NW SW 24-39N-23E
Apache County, Arizona File 412

Gentlemen:

With reference to your letter of February 1, 1968 on the above captioned well, enclosed please find two copies of the directional rig survey.

Please advise if we can be of further assistance.

Yours very truly,

HORIZON OIL & GAS CO.

Everett R. Tracy
Everett R. Tracy
Production Manager

ERT:jf



412

February 1, 1968

Horizon Oil & Gas Co. of Texas
P.O. Box #7
Spearman, Texas 79081

Re: Horizon Oil & Gas #1-24 Navajo0-Mobil
NW SW 24-39N-23E, Apache County, Arizona
File 412

Gentlemen:

In reviewing our file we note that a directional survey (rig)
was run; however we do not find a copy in the well file.

Would you please send this Commission a copy of that survey.

Very truly yours,

John Bannister
Executive Secretary
mr

HORIZON OIL & GAS CO.



P. O. BOX 7
SPEARMAN, TEXAS

September 14, 1967

The Oil & Gas Conservation Commission
of the State of Arizona
1624 West Adams
Phoenix, Arizona 85007

Re: Horizon Oil & Gas Co. of Texas
No. 1-24 Navajo-Mobil, Sec. 24
Township 39N, Range 23E,
Apache County, Arizona

Gentlemen:

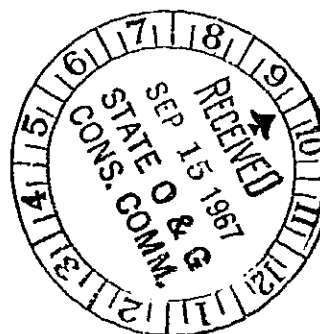
Attached please find original and one copy of "Sundry Notice and Report
on Well" for the above mentioned location.

Yours very truly,

HORIZON OIL & GAS CO. OF TEXAS

Everett R. Tracy
Everett R. Tracy
Production Manager

ERT:jf



412

June 20, 1967

Horizon Oil & Gas Co. of Texas
P.O. Box 7
Spearman, Texas 79081

Attention: Mr. Everett R. Tracy, Production Manager

Re: Horizon Oil & Gas #1-24 Navajo-Mobil
NW SW 24-39N-23E, Apache County, Arizona
Permit 412

Gentlemen:

It is our understanding that captioned well has been spudded and is drilling below 2,000 feet.

As we have indicated to you, this Commission should be kept currently informed as to the operations on any well drilling within the State of Arizona. For your convenience, in reporting wells drilling on the Navajo Reservation, we will accept copies of your reports to U.S. Geological Survey. There is one exception, that the Well Completion Report be on this Commission's form. We invite your attention to the enclosed information sheet. Copy of this sheet was forwarded with your permit.

You are requested to file with this Commission, at your earliest convenience, the reports to bring this well to its current status. Should you have any questions, or if we may be of assistance to you, please let us know.

Very truly yours,

John Bannister
Executive Secretary
mr
enc

HORIZON
OIL & GAS CO.

P. O. BOX 7
SPEARMAN, TEXAS

June 5, 1967

Oil and Gas Conservation Commission
State of Arizona
Room 202
1624 West Adams
Phoenix, Arizona 85007

Re: Horizon Oil & Gas Co. of Texas
#1-24 Navajo-Mobil, NW, SW, 24-
39N-23E, Apache County, Arizona
Permit 412

Attention: Mr. John Bannister

Dear Sir:

With reference to your letter of May 29, 1967, attached you will find a copy of the designation of operator from Mobil.

We would like to advise the name and address of the drilling contractor on the above captioned well is as follows:

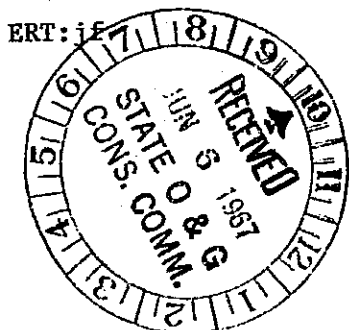
J.C.M. Drilling Co.
Citizens Bank Tower Bldg., Suite 600
Oklahoma City, Oklahoma 73106.

Please advise if we can be of further assistance.

Yours very truly,

HORIZON OIL & GAS CO. OF TEXAS

Everett R. Tracy
Everett R. Tracy
Production Manager



State of Arizona

Form 9-1-57
(Rev. 1-1-57)

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

DESIGNATION OF OPERATOR

INDIAN AFFAIRS

The undersigned is, on the records of the Bureau of Indian Affairs, holder of lease

DEPARTMENT OFFICE: Navajo Agency, Window Rock, Arizona
REVENUE CONTRACT No: 14-20-0003-3165

and hereby designates
Name: Horizon Oil & Gas Co. of Texas
Address: 801 North 10th St.,
Dallas, Texas 75201

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe activity for which this designation is applicable):

Township 32 North, Range 43 East, G. & G. R. 111
Section 24, 9 1/2 SW 1/4
Containing 80 acres, More or Less
Apache County, Arizona

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

HORIZON OIL CORPORATION

R. R. Church
(Signature of Operator)
Attorney-in-Fact

P. O. Box 1652
Casper, Wyoming 82601
(Address)

5-26-67
(Date)

U. S. GOVERNMENT PRINTING OFFICE: 1957-0-57000-3

- 412

HORIZON

OIL & GAS CO.

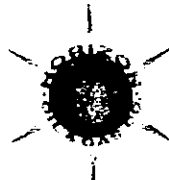
OF TEXAS (a corporation)

1216 Hartford Building

~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~

DALLAS 1, TEXAS

President - CURTIS E. CALDER, JR.
Vice Pres. - N. BRUCE CALDER



May 31, 1967

Oil & Gas Conservation Commission
State of Arizona
1624 W. Adams
Phoenix, Arizona 85000

Re: Designation of Operator
Contract No. 14-20-0603-8165
W $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 24-39N-23E G&SRM
Apache County, Arizona

Gentlemen:

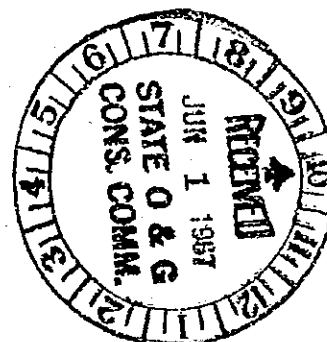
Submitted herewith, in triplicate, for filing in
your office is Designation of Operator executed on behalf
of Mobil Oil Corporation and designating Horizon Oil & Gas
Co. of Texas as operator of the captioned lease.

Very truly yours,

N. Bruce Calder
N. Bruce Calder

be
Enclosures

412



(Submit in triplicate to appropriate
Regional Oil and Gas or Mining Supervisor)

A-17

DESIGNATION OF OPERATOR

INDIAN AFFAIRS

The undersigned is, on the records of the Bureau of ~~Indian Affairs~~, holder of lease

~~DESIGNATION~~ LAND OFFICE: Navajo Agency, Window Rock, Arizona
~~XXXXXXXXXX~~ Contract No: 14-20-0603-8165

and hereby designates Horizon Oil & Gas Co. of Texas
Hartford Bldg.
NAME: Dallas, Texas 75201
ADDRESS:

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 39 North, Range 23 East, G.&S.R.M.
Section 24: W $\frac{1}{2}$ SW $\frac{1}{4}$

Containing 80 acres, More or Less
Apache County, Arizona

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

MOBIL OIL CORPORATION

R.R. Church
(Signature of lessee)
Attorney-In-Fact

P. O. Box 1652
Casper, Wyoming 82601
(Address)

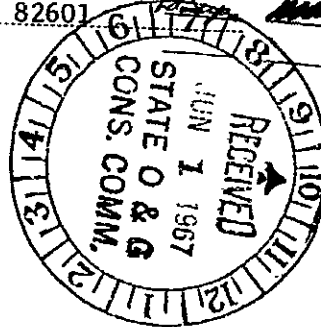
Approved

Land

Legal

T. R.

5-26-67
(Date)



412

DESIGNATION OF OPERATOR

INDIAN AFFAIRS

The undersigned is, on the records of the Bureau of ~~Indian Affairs~~, holder of lease

~~XXXXXX~~ LAND OFFICE: Navajo Agency, Window Rock, Arizona
~~XXXXXX~~ Contract No: 14-20-0603-8165

and hereby designates **Horizon Oil & Gas Co. of Texas**
Hartford Bldg.
NAME: **Dallas, Texas 75201**
ADDRESS:

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 39 North, Range 23 East, G.S.S.R.M.
Section 24: W $\frac{1}{2}$ SW $\frac{1}{2}$
Containing 80 acres, More or Less
Apache County, Arizona

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

MOBIL OIL CORPORATION

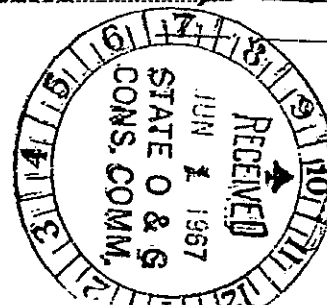
R. R. Church
(Signature of lessee)
Attorney-In-Fact

P. O. Box 1652
Casper, Wyoming 82601
(Address)

Approved

Land *ON*
Legal *W.R.H.*
T. R. *P.*
U.S.P.

5-26-67
(Date)



(Submit in triplicate to appropriate
Regional Oil and Gas or Mining Supervisor)

A-17

DESIGNATION OF OPERATOR

INDIAN AFFAIRS

The undersigned is, on the records of the Bureau of ~~Indian Affairs~~ holder of lease

~~DESIGNATION~~ LAND OFFICE: Navajo Agency, Window Rock, Arizona
~~ADDRESS~~ Contract No: 14-20-0603-8165

and hereby designates **Horizon Oil & Gas Co. of Texas**
Hartford Bldg.
NAME: **Dallas, Texas 75201**
ADDRESS:

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 39 North, Range 23 East, G.66.R.M.
Section 24: W $\frac{1}{2}$ SW $\frac{1}{4}$
Containing 80 acres, More or Less
Apache County, Arizona

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

MOBIL OIL CORPORATION

R. R. Church
(Signature of lessee)

Attorney-in-Fact

P. O. Box 1652

Casper, Wyoming 82601
(Address)

Approved

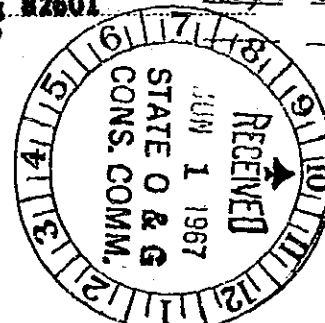
Land

Legal

T. R.

Ad. Sup.

5-26-67
(Date)



412

May 29, 1967

Horizon Oil & Gas Co.
P.O. Box 7
Spearman, Texas 79081

Attention: Mr. Everett R. Tracy, Production Manager

Re: Horizon Oil & Gas #1-24 Navajo-Mobil
NW SW 24-39N-23E, Apache County, Arizona
Permit 412

Gentlemen:

Enclosed are: Permit to Drill, approved copy of Application to Drill, filing receipt 9504, and two copies of your bond.

We do need a designation of operator from Mobil. For your convenience we have enclosed forms to accomplish this.

In addition, would you please advise the name and address of your drilling contractor.

If this office may be of assistance to you, please do not hesitate to contact us.

Very truly yours,

John Bannister
Executive Secretary
mr
encls

HORIZON OIL & GAS CO.



P. O. BOX 7
SPEARMAN, TEXAS
79061

May 24, 1967

United States Department of the Interior
Geological Survey
Box 959
Farmington, New Mexico 87401

Re: Horizon Oil & Gas Co., #1-24 Navajo-Mobil
Section 24, Township 39N, Range 23E,
Apache County, Arizona.

Gentlemen:

Enclosed please find original and two copies of Form No. 9-331 C
and Certified Acreage Plats on the above captioned location.

Yours very truly,

HORIZON OIL & GAS CO.

Everett R. Tracy
Everett R. Tracy
Production Manager

ERT:jf

cc: The Oil & Gas Conservation Commission
1624 West Adams
Phoenix, Arizona 85000

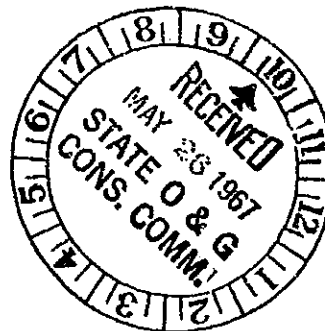
J. Greig Coogan
Ashland Oil & Refining Company
Box 18965
Oklahoma City, Oklahoma 73100

N. Bruce Calder

file

bcc:

(Check in the amount of \$25.00 and
Oil & Gas Conservation Comm.
Appl. for Permit to Drill also
enclosed.)



THE TRAVELERS

THE TRAVELERS INSURANCE COMPANY • THE TRAVELERS INDEMNITY COMPANY



May 17, 1967

DALLAS OFFICE
First National Bank Building
DALLAS, TEXAS 75202
Telephone: RIVERSIDE 7-8261

Oil and Gas Conservation Commission
State of Arizona
Phoenix, Arizona

Re: Bond No. 1315313
Horizon Oil & Gas Co. of Texas

Gentlemen:

Enclosed, please find bond and copies of the above captioned, further described as being executed by the undersigned as Attorney-in-Fact in the penal amount of \$5,000.00, effective May 12, 1967, and properly countersigned by a Resident Agent of your State.

We trust you will find the bond suitable for filing with your Department, but if not, please advise and we will do the necessary.

Yours very truly,

Julian I. Hazlewood
Julian I. Hazlewood,
Assistant Manager

JIH:gg

412

